

WHAT IS CLAIMED IS:

1 1. A method of developing user context from user Web session data that
2 includes nonlinear site flow events, the method comprising:
3 (a) detecting a nonlinear site flow event in the user session data;
4 (b) determining which, if any, information associated with the nonlinear site
5 flow event should be included in the user context;
6 (c) developing the user context in accordance with the determination in (b).

1 2. The method of claim 1 wherein determining which, if any, information
2 associated with the nonlinear site flow event should be included in the user context
3 comprises:
4 determining whether the nonlinear site flow event represents a new user
5 request or a past user request.

1 3. The method of claim 1 wherein detecting a nonlinear site flow event
2 comprises:
3 receiving a request identifier from a client-side system that provides an
4 identifier for a next expected Web page to be provided by a Web
5 server application;
6 determining whether the request identifier received from the client-side system
7 is the request identifier expected by a server-side system that includes
8 the Web server application.

1 4. The method of claim 3 further comprising:
2 including a next page request identifier in a query string from a client-side
3 system; and
4 tracking expected next page request identifiers in a server-side system.

1 5. The method of claim 1 wherein determining which, if any, information
2 associated with the nonlinear site flow event should be included in the user context
3 comprises:
4 storing state data for each batch of user session events;

5 after detecting a nonlinear site flow event, comparing first state data associated
 6 with an immediately preceding batch of events with second state data
 7 associated with a batch events associated with a page request identifier
 8 received from a client-side system;
 9 if the first state data matches the second state data, excluding the information
 10 associated with the nonlinear site flow event in the user context; and
 11 if the first state data does not match the second state data, including the
 12 information associated with the nonlinear site flow event in the user
 13 context.

1 6. The method of claim 1 wherein each nonlinear site flow event is
 2 associated with a batch of events corresponding to a single user Web session request,
 3 the method further comprising:
 4 including a nonlinear site flow identifier as a first event in each batch of events
 5 associated with a nonlinear site flow event.

1 7. The method of claim 1 further comprising:
 2 repeating (a), (b), and (c) for a plurality of user sessions; and
 3 developing a product demand signal from user contexts developed in (c).

1 8. A computer program product having instructions encoded therein to
 2 direct a processor to perform the method of claim 1.

9. The computer program product of claim 8 wherein the computer
 program product is selected from a the set of a disk, tape or other magnetic, optical, or
 5 electronic storage medium and a network, wireline, wireless or other communications
 medium.

1 10. A method for detecting nonlinear site flow and developing an accurate
 2 user session context, the method comprising:
 3 (a) receiving Web page requests initiated by a user, wherein the requests each
 4 include a respective request identifier that identifies a next page
 5 expected to be provided to the user by a Web server application;

- 6 (b) recording each batch of events associated with each Web page request;
- 7 (c) tracking a server-side identifier for each batch of events associated with
- 8 each Web page request;
- 9 (d) recording a nonlinear site flow event for a batch of events when the request
- 10 identifier in the Web page request does not correspond to the server-
- 11 side identifier;
- 12 (d) determining which, if any, information associated with the nonlinear site
- 13 flow event should be included in the user context; and
- 14 (f) developing the user context in accordance with the determination of which,
- 15 if any, information associated with the nonlinear site flow event should
- 16 be included in the user context.

1 11. The method of claim 10 further comprising:

2 determining whether the nonlinear site flow event represents a new user

3 request or a past user request.

1 12. The method of claim 10 wherein the Web page request comprises a

2 query string and the request identifier is embedded in the query string.

1 13. The method of claim 10 wherein determining which, if any,

2 information associated with the nonlinear site flow event should be included in the

3 user context comprises:

4 storing state data for each batch of user session events;

5 after detecting a nonlinear site flow event, comparing first state data associated

6 with an immediately preceding batch of events with second state data

7 associated with a batch events associated with a page request identifier

8 received from a client-side system;

9 if the first state data matches the second state data, excluding the information

10 associated with the nonlinear site flow event in the user context; and

11 if the first state data does not match the second state data, including the

12 information associated with the nonlinear site flow event in the user

13 context.

1 14. The method of claim 10 further comprising:
 2 repeating (a) through (f) to develop a set of user session contexts.
 3 developing a product demand signal from the set of user contexts.

1 15. A system for developing user session context from user session records
 2 that include nonlinear site flow events, the system comprising:
 3 a processor; and
 4 a memory coupled to the processor and having instructions stored therein and
 5 executable by the processor to:
 6 (a) detect a nonlinear site flow event in the user session data;
 7 (b) determine which, if any, information associated with the nonlinear
 8 site flow event should be included in the user context;
 9 (c) develop the user context in accordance with the determination in
 10 (b).

1 16. The system of claim 15 further comprising:
 2 one or more server applications to receive user session requests and record a
 3 batch of events corresponding to each user session request.

1 17. The system of claim 15 wherein determining which, if any,
 2 information associated with the nonlinear site flow event should be included in the
 3 user context comprises:
 4 determining whether the nonlinear site flow event represents a new user
 5 request or a past user request.

1 18. The system of claim 15 instructions to detect a nonlinear site flow
 2 event comprise:
 3 determining whether a request identifier received from a client-side system is
 4 the request identifier expected by a server-side system.

1 19. The system of claim 18 wherein the memory further includes
2 instructions to:
3 include a next page request identifier in a query string from a client-side
4 system; and
5 track expected next page request identifiers in a server-side system.

1 20. The system of claim 15 wherein instructions to determine which, if
2 any, information associated with the nonlinear site flow event should be included in
3 the user context comprise:
4 storing state data for each batch of user session events;
5 after detecting a nonlinear site flow event, comparing first state data associated
6 with an immediately preceding batch of events with second state data
7 associated with a batch events associated with a page request identifier
8 received from a client-side system;
9 if the first state data matches the second state data, excluding the information
10 associated with the nonlinear site flow event in the user context; and
11 if the first state data does not match the second state data, including the
12 information associated with the nonlinear site flow event in the user
13 context.

1 21. The system of claim 15 wherein each nonlinear site flow event is
2 associated with a batch of events corresponding to a single user Web session request,
3 and the memory further includes instructions to:
4 include a nonlinear site flow identifier as a first event in each batch of events
5 associated with a nonlinear site flow event.

1 22. The system of claim 15 wherein the memory further includes
2 instructions to:
3 perform (a), (b), and (c) for a plurality of user sessions; and
4 develop a product demand signal from user contexts developed in (c).

- 1 23. A system for developing user context from user Web session data that
2 includes nonlinear site flow events, the system comprising:
3 means for detecting a nonlinear site flow event in the user session data;
4 means for determining which, if any, information associated with the
5 nonlinear site flow event should be included in the user context;
6 means for developing the user context in accordance with the determination of
7 which, if any, information associated with the nonlinear site flow event
8 should be included in the user context.